I. Amendments To The Claims

1. - 61. (Canceled)

62. (New) An IFNAR2 polypeptide, wherein said polypeptide is mutated at amino acid residues histidine 78 and asparagine 100 of the extracellular domain, and wherein said mutation synergistically increase the affinity for IFN-β compared to the wild type polypeptide, and wherein said polypeptide has at least 70% identity to the wild type polypeptide.

63. (New) The polypeptide of claim 62, wherein histidine 78 is substituted by alanine.

64. (New) The polypeptide of claim 62, wherein asparagine 100 is substituted by alanine, aspartic acid or histidine.

65. (New) The polypeptide of claim 62, wherein both histidine 78 and asparagine 100 are substituted by alanine.

66. (New) The polypeptide of claim 62, wherein the polypeptide comprises a sequence selected from the group consisting of SEQ ID NOS: 2, 3 and 4.

67. (New) The polypeptide of claim 62, wherein the affinity to IFN-β is at least 30 pM.

68. (New) The polypeptide of claim 62, wherein the affinity to IFN-β is at least 25 to 100-fold higher than the affinity of the wild type polypeptide.

69. (New) The polypeptide of claim 62, wherein the polypeptide comprises the extracellular domain.

70. (New) The polypeptide of claim 62, wherein the polypeptide is covalently bound to IFN.

71. (New) The polypeptide of claim 70, wherein the IFN is IFN-β.

72. (New) An IFNAR2 polypeptide, wherein said polypeptide is mutated at amino acid residues histidine 78 and asparagine 100 of the extracellular domain, and wherein said mutation synergistically increase the affinity for IFN-β compared to the

wild type polypeptide, and wherein said polypeptide has at least 85% identity to the wild type polypeptide.

73. (New) An IFNAR2 polypeptide, wherein said polypeptide is mutated at amino acid residues histidine 78 and asparagine 100 of the extracellular domain, and wherein said mutation synergistically increase the affinity for IFN-β compared to the wild type polypeptide, and wherein said polypeptide has at least 90% identity to the wild type polypeptide.

74. (New) An IFNAR2 polypeptide, wherein said polypeptide is mutated at amino acid residues histidine 78 and asparagine 100 of the extracellular domain, and wherein said mutation synergistically increase the affinity for IFN-β compared to the wild type polypeptide, and wherein said polypeptide has at least 95% identity to the wild type polypeptide.

75. (New) The polypeptide according to any one of claims 62-74, wherein the polypeptide is a fragment, analog, functional derivative or fusion protein of IFNAR2.

76. (New) A DNA encoding the polypeptide of claim 62.

77. (New) The DNA of claim 76, wherein the polypeptide comprises a signal peptide sequence.

78. (New) The DNA of claim 77, wherein the signal peptide sequence is that of human growth hormone.

79. (New) A vector comprising the DNA according to any one of claims 76-78, wherein the vector is capable of expressing the polypeptide in a prokaryotic host cell or eukaryotic host cell.

80. (New) A host cell comprising the vector of claim 79.

81. (New) A method of producing an IFNAR2 mutant polypeptide comprising:

(a) cultivating the cell of claim 80 under conditions that cause the expression of the polypeptide; and

(b) isolating the polypeptide.

82. (New) A composition comprising the polypeptide of claim 62 and optionally an IFN antagonist.

83. (New) A method of treating a condition associated with modulation of IFN comprising administering to a patient in need thereof a therapeutically effective amount of the composition of claim 82, wherein the condition is selected from the group consisting of cancer, autoimmune disease and viral disease.

84. (New) The method of claim 83, wherein the cancer is selected from the group consisting of hairy cell leukemia, Kaposi's sarcoma, multiple myeloma, chronic myelogenous leukemia, non-Hodgkins's lymphoma and melanoma

85. (New) The method of claim 83, wherein the autoimmune disease is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, myasthenia gravis, diabetes, lupus and ulcerative colitis.

86. (New) The method of claim 83, wherein the viral disease is selected from the group consisting of chronic granulomatous disease, condyloma acuminatum, juvenile laryngeal papillomatosis, hepatitis A, hepatitis B and hepatitis C.